

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>G1184 PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 03/09223</b>	International filing date (day/month/year) <b>20/08/2003</b>	(Earliest) Priority Date (day/month/year) <b>20/08/2002</b>
Applicant <b>B.R.A.I.N. BIOTECHNOLOGY RESEARCH AND...</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

## 4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

## 5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

## 6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP 03/09223

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

As a result of the prior review under R. 40.2(e) PCT,  
all additional fees are to be refunded.

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
  
1-28
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☒ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-28

Device for isolating nucleic acids comprising two layers, one layer being adapted to bind or inactivate inhibitors (contaminants) and the other layer being adapted to separate nucleic acid molecules with respect to their size; methods using said devices and DNA libraries obtainable therewith.

2. Claims: 29-39

Nucleic acids isolated from a crenarchaeota; methods and reagents derived therefrom

## INTERNATIONAL SEARCH REPORT

International Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, EPO-Internal, PAJ, FSTA, BIOSIS, EMBASE, MEDLINE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/00168 A (BIOSEPRA INC) 7 January 1999 (1999-01-07)	1,2,5,6, 8,9, 16-26 10-15
Y	the whole document	10-15
Y	--- WO 01/40497 A (AVENTIS PHARMA SA ;PERNODET JEAN LUC (FR); COURTOIS SOPHIE (FR); J) 7 June 2001 (2001-06-07) page 20 -page 21	10-15
X	--- DATABASE WPI Section Ch, Week 198934 Derwent Publications Ltd., London, GB; Class B04, AN 1989-246867 XP002266614 & SU 1 439 124 A (ANTI-PLAGUE MIKROB), 23 November 1988 (1988-11-23) abstract --- -/--	1,2,5,6, 8,16-25

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

20 April 2004

Date of mailing of the international search report

08 JUN 2004

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/09223

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 5 817 225 A (HINTON STEPHEN M) 6 October 1998 (1998-10-06) the whole document	26-28 1-4,6-9, 16-25
X	--- MACNEIL I A ET AL: "EXPRESSION AND ISOLATION OF ANTIMICROBIAL SMALL MOLECULES FROM SOIL DNA LIBRARIES" JOURNAL OF MICROBIOLOGY AND BIOTECHNOLOGY, KOREAN SOCIETY FOR APPLIED MICROBIOLOGY, SEOUL, KO, vol. 3, no. 2, April 2001 (2001-04), pages 301-308, XP001050545 ISSN: 1017-7825 cited in the application the whole document	26-28
X	--- BÉJÀ O ET AL: "Construction and analysis of bacterial artificial chromosome libraries from a marine microbial assemblage." ENVIRONMENTAL MICROBIOLOGY. ENGLAND OCT 2000, vol. 2, no. 5, October 2000 (2000-10), pages 516-529, XP002277482 ISSN: 1462-2912 cited in the application page 517, right-hand column	26-28
X	--- WO 01/81357 A (LIBRAGEN ;NALIN RENAUD (FR); ROBE PATRICK (FR); TRAN VAN VAN (FR)) 1 November 2001 (2001-11-01) the whole document	26-28
P,X	--- QUAISER ACHIM ET AL: "First insight into the genome of an uncultivated crenarchaeote from soil." ENVIRONMENTAL MICROBIOLOGY. ENGLAND OCT 2002, vol. 4, no. 10, October 2002 (2002-10), pages 603-611, XP002266613 ISSN: 1462-2912 the whole document	1-39
A	--- ROOSE-AMSALEG C L ET AL: "Extraction and purification of microbial DNA from soil and sediment samples" APPLIED SOIL ECOLOGY, vol. 18, no. 1, September 2001 (2001-09), pages 47-60, XP002266612 ISSN: 0929-1393 the whole document --- -/--	

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/09223

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>LEBRETON M ET AL: "DEMONSTRATION OF EXTRACTION AND PCR AMPLIFICATION OF DNA FROM PHYTOPLANKTON OF LAKES WITH HIGH HUMIC ACID CONTENT" HYDROBIOLOGIA, JUNK, THE HAGUE, NL, vol. 438, 1 November 2000 (2000-11-01), pages 91-97, XP008026153 ISSN: 0018-8158</p> <p>-----</p>	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/09223

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9900168	A	07-01-1999	AT 248631 T	15-09-2003
			AU 7987398 A	19-01-1999
			CA 2294749 A1	07-01-1999
			DE 69817818 D1	09-10-2003
			EP 0991456 A1	12-04-2000
			JP 2002511147 T	09-04-2002
			WO 9900168 A1	07-01-1999
			US 5981736 A	09-11-1999
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WO 0140497	A	07-06-2001	FR 2801609 A1	01-06-2001
			AU 2179101 A	12-06-2001
			BR 0015993 A	06-08-2002
			CA 2393041 A1	07-06-2001
			EP 1268764 A2	02-01-2003
			WO 0140497 A2	07-06-2001
			JP 2003520578 T	08-07-2003
			NO 20022532 A	26-06-2002
			ZA 200203532 A	04-08-2003
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SU 1439124	A	23-11-1988	SU 1439124 A1	23-11-1988
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US 5817225	A	06-10-1998	NONE	
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WO 0181357	A	01-11-2001	FR 2808276 A1	02-11-2001
			AU 4844701 A	07-11-2001
			CA 2407270 A1	01-11-2001
			EP 1278831 A2	29-01-2003
			WO 0181357 A2	01-11-2001
			US 2003049675 A1	13-03-2003
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